

IN THE CLAIMS

Please amend the claims as follows:

Claims 1-12 (Canceled).

Claim 13 (Currently Amended) A method of producing an electrolyte membrane comprising:

providing a precursor membrane comprising a polymer which is capable of being graft polymerized;

exposing the surface of the precursor membrane to a plasma in an oxidative atmosphere to generate a-surface carbonyl group groups, a surface hydroxyl group groups, or a-surface carbonyl group groups and a-surface hydroxyl group groups;

graft-polymerizing a side chain polymer to the plasma treated precursor membrane; and

introducing a proton conductive functional group to the side chain polymer.

Claim 14 (Canceled).

Claim 15 (Previously Amended): The method of Claim 13, wherein the polymer is at least one polymer selected from the group consisting of polyethylene, polypropylene, polyvinylchloride, polyvinylidenedichloride, polyvinylflouride, polyvinylidenedifluoride, polytetrafluoroethylene, ethylene-tetrafluoroethylene copolymer, tetrafluoroethylene-perfluoroalkylvinylether copolymer, and tetrafluoroethylene-hexafluoropropylene copolymer.

Claim 16 (Original): The method of Claim 13, wherein the side chain polymer is a hydrocarbon polymer to which at least one proton conductive group can be introduced.